



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,329	10/22/2001	Tetsuyuki Miyawaki	112857-286	3661

29175 7590 04/08/2003

BELL, BOYD & LLOYD, LLC  
P. O. BOX 1135  
CHICAGO, IL 60690-1135

EXAMINER

DOWLING, WILLIAM C

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 04/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/039,329

Applicant(s)

MIYAWAKI ET AL.

Examiner

William C. Dowling

Art Unit

2851

-- Th MAILING DATE of this communication appears on th cov r sheet with the correspond nce address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 13, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13, 15-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2851

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ooi et al.

Ooi et al. discloses a projection system comprising three reflection light valves (31, 32, 33) ;

first and second wavelength separation mirrors (21, 22);

A projection lens system and a light source system.

As seen in figure 2 aperture-mirror means act as "light separation means" for directing light from the source to the light valves and directing light from the light valves to the projection system.

Art Unit: 2851

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doany et al.

Doany et al. discloses a projection system comprising:

reflection type light valves for rotating a polarization and forming a modulated image;

a light source (12);

a projection system (38);

light separation means (22) for directing light from the source to the light valves and directing modulated light from the light valves to the projection system.

polarization separation means (40, 42) are provided adjacent before and after the light separation means but are not formed "on" the light separation means surface.

It would have been an obvious modification of the device of Doany et al. to form the polarization means "on" the separation

Art Unit: 2851

cube because such modification would constitute the known rationale of making the structure "integral".

5. Claims 2-4, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doany et al. in view of Ooi et al.

Doany et al teaches a projection arrangement using dichroic prisms as the color separation means. A polarizing filter (40) is placed between the light source and light separation means. A second polarizing film (42) is placed between the light separation means and the projection means and polarization modulators are used.

Ooi et al. teaches the use of color separation "mirrors" of a particular arrangement for directing light to reflective modulators.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Doany et al. by the use of color separation mirrors, as taught by Ooi et al. rather than dichroic mirrors in order to obtain the advantages noted by Ooi et al. note that Ooi et al. recognize the use of prisms in figure 31.

6. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doany et al. in view of Kobayashi et al.

Art Unit: 2851

Doany et al. disclose the invention substantially as claimed but do not teach the use of polarization means which reflect rather than absorb one of the components.

Kobayashi et al. teaches the known usage of reflection type polarizing means which reflect rather than absorb light of a particular polarization.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Doany et al. by the substitution of a reflection type polarizer, as taught by Kobayashi et al. in order to reduce temperature increases in projector components, as taught by Kobayashi et al.

It would have been an obvious modification of the device of Doany et al. to form the polarization means "on" the separation cube because such modification would constitute the known rationale of making the structure "integral".

#### ***Response to Arguments***

7. Applicant's arguments filed 1/16/2003 have been fully considered but they are not persuasive.

8. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's argument regarding Claims 1 and 5 rejected by Ooi et al. are unpersuasive because the limitation drawn to

Art Unit: 2851

"light separation means" is met by the mirror and aperture system in Ooi et al. Such a term is broadly construed.

Arguments directed to forming of polarizations elements "on" surfaces is addressed above and relates to well established principles of making elements integral being an accepted and obvious motivation.

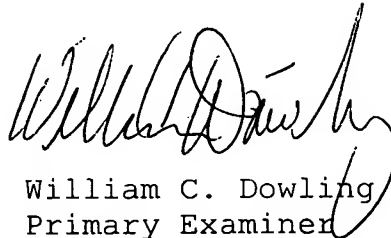
Applicant's arguments regarding the combination of Ooi et al and Doany et al. is unpersuasive because Ooi et al. is relied upon to teach the use of color separation "mirrors" rather than prism separators in an optical system and Doany et al. teaches the use of the polarization system.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Dowling whose telephone number is 703-308-1287. The examiner can normally be reached on Mon.-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7723 for regular communications and 703-305-7723 for After Final communications.

Art Unit: 2851

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.



William C. Dowling  
Primary Examiner  
Art Unit 2851

wcd  
April 7, 2003